Stormwater Language:

Regarding stormwater, ~~most businesses~~ industrial activities within the Lower Willamette River industrial corridor ~~are under~~require registration under ~~a~~ DEQ's 1200Z Industrial Stormwater General permit for management of their stormwater releases. Contaminants required to be monitored and corrected in on-going permitted discharges include most of the contaminants driving sediment cleanup. The permit can be expanded, as needed, to include additional contaminants, additional permittees, and other Portland Harbor-specific considerations. In addition, DEQ's source control program requires evaluation and control of the stormwater pathway at all sites, whether or not an industrial stormwater permit is required. Commercial and residential sites are also subject to DEQ and City of Portland stormwater control programs. Finally, the stormwater pathway from all roadways to the Harbor is also being evaluated and controlled.~~In addition, treatment will be required for some permit holders to meet the Phase II stormwater requirements.~~ Because of completed and ongoing efforts to control stormwater discharges, this FS assumes that contaminant discharges will be controlled. As a result, stormwater is not discussed in Section 1.2.3.

Commented [al1]: This is inaccurate as no commercial operations are under permit and only 74 industrial operations are registered in the PH area (with another 83 no exposure certifications).

Groundwater Language:

NW Natural: Please review highlighted list of groundwater contaminants.

NW Natural/Gasco – Groundwater plumes associated with historical MGP waste are known to be discharging to the river. Contaminants detected in groundwater include PAHs, SVOCs, VOCs (e.g., benzene, ethylbenzene, toluene and xylene – BTEX), gasoline- range hydrocarbons, diesel- range hydrocarbons, residual-range hydrocarbons, cyanide, sulfide and carbon disulfide, ammonia, and metals (aluminum, iron and …. A hydraulic control pump and treatment system has been constructed at the riverbank and is currently being tested.

Siltronic: Need to confirm metals detected in groundwater above SLVs.

Rhone Poulenc: Please review and revise below paragraph as necessary.

Rhone Poulenc – Known releases of organochlorine insecticides and herbicides, including PCP, 2,4-DP, Bromoxynil, 4(2,4-dichloropenoxy)butyric acid (2,4-DB), 2-methyl-4-chlorophenoxyacetic (MCPA), methylchlorophenoxypropionic acid (MCPP), 4-(4-chloro-2-methylphenoxy)butanoic acid (MCPB), 2,4,5-trichlorophenoxyacetic acid [2,4,5-T], 2,4-dichlorophenoxyacetic acid (2,4-D), DDT, Endrin, Heptachlor, sodium chlorate, sodium arsenate, 2,4,5-TP (Silvex), aldrin, dieldrin, chlordanes, and dichlorprop have occurred at the site. Contaminants detected in groundwater include VOCs (e.g., dichlorobenzene isomers, chlorobenzene, benzene, chloroform, trichloroethene, dichloroethene, and vinyl chloride), insecticides (e.g., DDT, dieldrin), herbicides (e.g., Silvex, 2,4-D), several metals (e.g., arsenic), and dioxins/furans.

Arkema: Please review and revise below paragraph as necessary:

Arkema – Contaminants detected in groundwater at the site include DDT and its metabolites DDD and DDE, and MCB—that are primarily associated with pesticide manufacturing process residue (MPR), along with perchlorate and hexavalent chromium associated with the Chlorate Plant area.. Investigation of the contaminated groundwater discharges is ongoing. A barrier wall and groundwater pump and treat system is being constructed to manage the groundwater plumes on the southern end of the property.

Chevron/Willbridge: Please review and revise below paragraph as necessary:

Chevron and Unocal Willbridge Bulk Terminal – A TPH plume located onsite has discharged to the river. Contaminants include LNAPL, gasoline- range hydrocarbons, diesel- range hydrocarbons, residual-range hydrocarbons, and arsenic. Nineteen control measures have been implemented at the site between the early 1970s and 2010 to address the potential migration of impacted groundwater to the Willamette River. Saturated petroleum hydrocarbon (SPH) contamination has been detected at various locations across the site. Observations of sheen associated with recent high groundwater conditions has raised concerns regarding the adequacy of the LNAPL containment system; additional characterization is in progress, and it is expected that modifications to the LNAPL containment system will be proposed.

Gunderson: Please review and revise below paragraphs as necessary:

Gunderson –There is a chlorinated VOC plume (1,1-DCE, 1,1,1-trichloroethane [1,1,1-TCA], PCE, TCE and vinyl chloride) near the downstream end of the Gunderson property. An air sparge/soil vapor extraction and a pump and treat system were operating for the VOC plume. DEQ approved the shut-down of these systems and a schedule of expanded groundwater monitoring.

In addition, there is a PAH groundwater plume located between the Equilon (Shell Terminal) pipeline gasoline release and the Equilon dock at Gunderson. The PAH plume was determined by DEQ to not be discharging to the river.

Riverbank Language:

Siltronic/BNSF RR Bridge: Please review and revise below paragraphs as necessary:

Siltronic – Contamination associated with historical MGP waste is known to be present in the northern portion of the Siltronic riverbank. Riverbank contaminants include PAHs, gasoline- range hydrocarbons, diesel- range hydrocarbons, residual-range hydrocarbons and cyanide.

Burlington Northern and Santa Fe Railroad Bridge – Contamination associated with and pesticide and herbicide releases from Rhone Poulenc and Arkema are known to be present in the river bank below and adjacent to the Burlington Northern and Santa Fe railroad bridge. Riverbank contaminants include, PCP, 2,4-DP, Bromoxynil, 2,4-DB, MCPA, MCPP, MCPB, 2,4-T, 2,4-D, DDT, Endrin, Heptachlor, sodium chlorate, sodium arsenate, 2,4,5-TP, 2,4,5-T, aldrin, dieldrin, and chlordanes.